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Article: *Trying to clear the air: e-cigarette use and periodontal disease*

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CPD:
ONE HOUR

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Literature Review

Trying to clear the air: e-cigarette use and periodontal disease

Gabby Robson, Xi Ci Lin, Iman Chaudhari, Jushy Horley, Sam Khalil, Veronica Amin and Luigi Nisibani

Key points

- Summarises the current evidence on the effect of e-cigarette use on periodontal health and compares it to conventional smoking and non-smoking.
- Educates on the possible effects of e-cigarette use on periodontal health and the findings of current evidence.
- Addresses the discrepancy between public perception of e-cigarette use and the findings of current evidence.
- Provides a summary of current guidelines and advice to practitioners.

Abstract

Introduction With record rates of e-cigarette use in the United Kingdom, it is becoming more important that dental professionals understand the consequences of e-cigarette use on oral health.

Methods This narrative review considers the current bank of literature regarding e-cigarette use and periodontal health and disease.

Results Some studies have found that e-cigarette users had worsened periodontal health and poorer response to periodontal treatment compared to non-smokers. However, there is mixed evidence on this topic and the current evidence base remains limited, with few high-quality studies available. Similarly, although current research suggests that e-cigarette use is safer for the periodontium than conventional smoking, further long-term, large-cohort studies will be required to improve the evidence base.

Conclusion In the meantime, the guidance from the British Society of Periodontology and Implant Dentistry is to ensure patients understand the lack of information and research available. The National Institute for Health and Care Excellence supports this and note that there may be a place for e-cigarettes as an aid to quitting smoking, supporting patients to become tobacco-free. It would, however, be sensible for dental practitioners to discourage negative health habits, including e-cigarette use, unless to replace a potentially more dangerous habit, such as conventional smoking.

Introduction

The prevalence of e-cigarette use (vaping) has increased significantly, with record rates of use reaching 9.1% in the United Kingdom (UK). Given that e-cigarettes were introduced in the early 2000s, scientific literature on this subject is limited compared to that of conventional smoking. However, there are emerging trends in the literature.

Aim

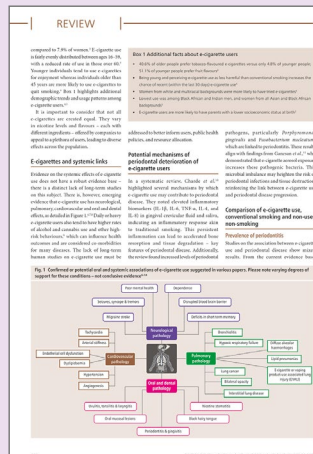
To educate clinicians on the current literature regarding the impacts of e-cigarette use on periodontal health and its limitations, including current guidance provided.

Methods

This narrative review was developed as a follow-on from the Student British Society of Periodontology and Implant Dentistry (BSPI) website. The review, 'Vaping: a risk for periodontal health? By students, for students', which was presented by the authors of this paper. A literature search was conducted using PubMed and Google Scholar. Search terms included combinations of 'e-cigarette', 'vaping', 'systemic effects', 'periodontal health', 'periodontal status', 'periodontal treatment', 'implant outcomes', and 'smoking cessation'. Given the limited number of studies and systematic reviews available in this area, a narrative review approach was considered appropriate to synthesise the existing literature. To inform the 'Practitioner guides' section, the latest guidelines and recommendations were sourced from the official websites of the National Institute for Health and Care Excellence (NICE), the BSPI and the Delivering Better Oral Health (DBOH) toolkit published by the Office for Health Improvement and Disparities, Department of Health and Social Care, NHS England and NHS Improvement (these are correct as of the date of manuscript submission).

Characteristics of e-cigarette users

Most e-cigarette users are current or previous smokers using among ever-smokers has been reported to be rare.¹ Use among men is more common, with 5.5% of men 16 years and older reporting e-cigarette use daily or occasionally,



2. e-cigarette use may contribute to periodontal disease by which mechanism?

A. increased levels of periodontal pathogens

B. elevated inflammation in the periodontal tissues

C. persistent inflammation leading to bone resorption and tissue degradation

D. all of the above

3. Very brief advice from the Delivering Better Oral Health toolkit to help smokers quit smoking involves:

A. Action, Address, Maintain

B. Ask, Advise, Act

C. Alert, Address, Action

D. Activate, Distract, Deliver

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